CATERPILLAR, INC.

EXECUTIVE ORDER U-R-001-0219 New Off-Road Compression-Ignition Engines

Pursuant to the authority vested in the Air Resources Board by Sections 43013, 43018, 43101, 43102, 43104 and 43105 of the Health and Safety Code; and

Pursuant to the authority vested in the undersigned by Sections 39515 and 39516 of the Health and Safety Code and Executive Order G-02-003;

IT IS ORDERED AND RESOLVED: That the following compression-ignition engine and emission control system produced by the manufacturer are certified as described below for use in off-road equipment. Production engines shall be in all material respects the same as those for which certification is granted.

MODEL YEAR	ENGINE FAMILY	DISPLACEMENT (liters)	FUEL TYPE	USEFUL LIFE (hours)
2003	3CPXL27.0MRT	27.0	Diesel	8000
SPECIAL	FEATURES & EMISSION	CONTROL SYSTEMS	TYPICAL EQUIPMENT	APPLICATION
Direct Dies	sel Injection, Turbocharg and Engine Control I	er, Charge Air Cooler Module	Generator S	Set

The engine models and codes are attached.

The following are the exhaust certification standards (STD) and certification levels (CERT) for hydrocarbon (HC), oxides of nitrogen (NOx), or non-methane hydrocarbon plus oxides of nitrogen (NMHC+NOx), carbon monoxide (CO), and particulate matter (PM) in grams per kilowatt-hour (g/kw-hr), and the opacity-of-smoke certification standards and certification levels in percent (%) during acceleration (Accel), lugging (Lug), and the peak value from either mode (Peak) for this engine family (Title 13, California Code of Regulations, (13 CCR) Section 2423):

RATED POWER	EMISSION STANDARD				EXHAUST (g/kw-l	hr)		OF	PACITY (%	6)
CLASS	CATEGORY		HC	NOx	NMHC+NOx	со	PМ	ACCEL	LUG	PEAK
KW >560	Tier 1	STD	9.2	1.3	N/A	11.4	0.54	N/A	N/A	N/A
		CERT	0.2	8.0		1.0	0.16			

BE IT FURTHER RESOLVED: That for the listed engine models, the manufacturer has submitted the information and materials to demonstrate certification compliance with 13 CCR Section 2424 (emission control labels), and 13 CCR Sections 2425 and 2426 (emission control system warranty).

Engines certified under this Executive Order must conform to all applicable California emission regulations.

This Executive Order is only granted to the engine family and model-year listed above. Engines in this family that are produced for any other model-year are not covered by this Executive Order.

Executed at El Monte, California on this

_ day of December 20

Allen Lvons, Chief

Mobile Source Operations Division

Engine Model 8 mary Form

ATT HIMENT 1 OF 1

Manufacturer: CATERPILLAR INC.

Engine category: Nonroad Over 50 Hp

12-10-19

EPA Engine Famiy∴, 3CPXL27.0MRT

Mfr Family Name: NA

Process Code: New Submission

1.Engine Code	1.Engine Code 2.Engine Model	3.BHP@RPM (SAE Gross)	4.Fuel Rate: mm/stroke @ peak HP (for diesel only)	5.Fuel Rate: (lbs/hr) @ peak HP (for diesets onty)	6.Torque @ RPM. (SEA Gross)	7.Fuel Rate: mm/stroke@peak torque	8.Fuel Rate: (lbs/hr)@peak torque	8.Fuel Rate: 9.Emission Control lbs/hr)@peak torque Device Per SAE J1930
Note: Peak Hp 1 - Cert Engine 2	Note: Peak Hp and Peak Torque 1 - Cert Engine 3412 2 3412	fuel rates are 1063@1800 991@1800	nominal values. 307 274	Due to product- 371.6 332.0	ion engine avgs. N/A N/A	these fuel rates N/A N/A	may change. N/A N/A	EM, DI, TC, ECM, €9€ EM, DI, TC, ECM, €9€